

**ABSTRACT**

A composite material comprised of polymeric beads and adhesive, primarily intended for use in constructing buildings, athletic fields, waste pond covers, packaging, contact sports gear and medial equipment, is comprised of a plurality of electrical excitation zone-treated beads having average diameters between about 1 mm and about 10 mm that are substantially coated with the adhesive material and used in quantities such that void spaces constitute at least about 10 percent by volume of the total volume of the composite material.

Upon curing, said adhesive preferably has hardness levels ranging from about Shore A 20 to about Shore A 95.